

# Yoosuf N Picard

## List of Publications by Year in descending order

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85  
papers

1,364  
citations

279487

23  
h-index

360668

35  
g-index

87  
all docs

87  
docs citations

87  
times ranked

1892  
citing authors

#	ARTICLE	IF	CITATIONS
1	Focused ion beam-shaped microtools for ultra-precision machining of cylindrical components. Precision Engineering, 2003, 27, 59-69.	1.8	100
2	Oxygen Vacancy Creation, Drift, and Aggregation in TiO <sub>2</sub> -Based Resistive Switches at Low Temperature and Voltage. Advanced Functional Materials, 2015, 25, 2876-2883.	7.8	81
3	Cathodoluminescence Studies of the Inhomogeneities in Sn-doped Ga <sub>2</sub> O <sub>3</sub> Nanowires. Nano Letters, 2009, 9, 3245-3251.	4.5	75
4	Femtosecond laser machining of single-crystal superalloys through thermal barrier coatings. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 430, 203-207.	2.6	71
5	Rapid misfit dislocation characterization in heteroepitaxial III-V/Si thin films by electron channeling contrast imaging. Applied Physics Letters, 2014, 104, .	1.5	55
6	Growth of Sn-Doped $\text{In}^2\text{-Ga}_2\text{O}_3$ Nanowires and Ga <sub>2</sub> O <sub>3</sub> -SnO <sub>2</sub> Heterostructures for Gas Sensing Applications. Crystal Growth and Design, 2009, 9, 4471-4479.	1.4	48
7	UHCSDB: UltraHigh Carbon Steel Micrograph DataBase. Integrating Materials and Manufacturing Innovation, 2017, 6, 197-205.	1.2	48
8	Pulsed laser ignition of reactive multilayer films. Applied Physics Letters, 2006, 88, 144102.	1.5	46
9	Electron channeling contrast imaging of atomic steps and threading dislocations in 4H-SiC. Applied Physics Letters, 2007, 90, 234101.	1.5	43
10	High-Throughput Characterization of Surface Segregation in Cu <sub>x</sub> Pd <sub>1-x</sub> Alloys. Journal of Physical Chemistry C, 2011, 115, 10155-10163.	1.5	43
11	<i>In Situ</i> TEM Imaging of Defect Dynamics under Electrical Bias in Resistive Switching Rutile-TiO <sub>2</sub> . Microscopy and Microanalysis, 2015, 21, 140-153.	0.2	42
12	Controlled Growth of Parallel Oriented ZnO Nanostructural Arrays on Ga <sub>2</sub> O <sub>3</sub> Nanowires. Crystal Growth and Design, 2009, 9, 1164-1169.	1.4	39
13	Direct observation of basal-plane to threading-edge dislocation conversion in 4H-SiC epitaxy. Journal of Applied Physics, 2011, 109, .	1.1	39
14	Theory of dynamical electron channeling contrast images of near-surface crystal defects. Ultramicroscopy, 2014, 146, 71-78.	0.8	38
15	Applications of Electron Channeling Contrast Imaging for the Rapid Characterization of Extended Defects in III-V/Si Heterostructures. IEEE Journal of Photovoltaics, 2015, 5, 676-682.	1.5	35
16	Growth and photoluminescence properties of vertically aligned SnO <sub>2</sub> nanowires. Journal of Crystal Growth, 2009, 311, 3158-3162.	0.7	31
17	Impact of Joule heating on the microstructure of nanoscale TiO <sub>2</sub> resistive switching devices. Journal of Applied Physics, 2013, 113, .	1.1	30
18	Transient Thermometry and High-Resolution Transmission Electron Microscopy Analysis of Filamentary Resistive Switches. ACS Applied Materials & Interfaces, 2016, 8, 20176-20184.	4.0	30

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19	Diffraction contrast and Bragg reflection determination in foreshattered electron channeling contrast images of threading screw dislocations in 4H-SiC. Journal of Applied Physics, 2008, 104, .	1.1	27
20	Electrical and Optical Characterization of AlGaIn/GaN HEMTs with In-Situ and Ex-Situ Deposited SiN <sub>x</sub> Layers. Journal of Electronic Materials, 2010, 39, 2452-2458.	1.0	27
21	Future Prospects for Defect and Strain Analysis in the SEM via Electron Channeling. Microscopy Today, 2012, 20, 12-16.	0.2	25
22	Relating Precursor Pyrolysis Conditions and Aqueous Electrolyte Capacitive Energy Storage Properties for Activated Carbons Derived from Anhydrous Glucose-d. Journal of the Electrochemical Society, 2011, 158, A83.	1.3	24
23	Dislocation impact on resistive switching in single-crystal SrTiO <sub>3</sub> . Journal of Applied Physics, 2013, 113, .	1.1	24
24	Digital image analysis to quantify carbide networks in ultrahigh carbon steels. Materials Characterization, 2016, 117, 134-143.	1.9	22
25	Nanosecond laser induced ignition thresholds and reaction velocities of energetic bimetallic nanolaminates. Applied Physics Letters, 2008, 93, .	1.5	19
26	Exchange bias in a single phase ferrimagnet. Journal of Applied Physics, 2010, 107, .	1.1	19
27	Imaging Dislocations in Single-Crystal SrTiO <sub>3</sub> Substrates by Electron Channeling. Journal of Electronic Materials, 2011, 40, 2222-2227.	1.0	17
28	Microstructure of epitaxial GaN films grown on chemomechanically polished GaN(0001) substrates. Journal of Crystal Growth, 2012, 347, 88-94.	0.7	17
29	Role of a native oxide on femtosecond laser interaction with silicon (100) near the damage threshold. Applied Physics Letters, 2005, 86, 264103.	1.5	15
30	Synthesis of Group IV Nanowires on Graphene: The Case of Ge Nanocrawlers. Nano Letters, 2016, 16, 5267-5272.	4.5	15
31	Coarsening of Inter- and Intra-granular Proeutectoid Cementite in an Initially Pearlitic 2C-4Cr Ultrahigh Carbon Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 2320-2335.	1.1	15
32	Identifying threading dislocations in GaN films and substrates by electron channelling. Journal of Microscopy, 2011, 244, 311-319.	0.8	14
33	On-Demand Nanoscale Manipulations of Correlated Oxide Phases. Advanced Functional Materials, 2019, 29, 1905585.	7.8	14
34	CL/EBIC-SEM Techniques for Evaluation of Impact of Crystallographic Defects on Carrier Lifetime in 4H-SiC Epitaxial Layers. Materials Science Forum, 0, 645-648, 211-214.	0.3	12
35	Site-specific comparisons of V-defects and threading dislocations in InGaIn/GaN multi-quantum-wells grown on SiC and GaN substrates. Journal of Crystal Growth, 2014, 387, 16-22.	0.7	12
36	Epitaxial SiC Growth Morphology and Extended Defects Investigated by Electron Backscatter Diffraction and Electron Channeling Contrast Imaging. Journal of Electronic Materials, 2008, 37, 691-698.	1.0	11

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37	Glide of threading edge dislocations after basal plane dislocation conversion during 4H-SiC epitaxial growth. <i>Journal of Crystal Growth</i> , 2015, 418, 7-14.	0.7	11
38	<i>In Situ</i> Platform for Isothermal Testing of Thin-Film Mechanical Properties Using Thermal Actuators. <i>Journal of Microelectromechanical Systems</i> , 2015, 24, 2008-2018.	1.7	10
39	Femtosecond laser heat affected zones profiled in Co-Si multilayer thin films. <i>Applied Physics Letters</i> , 2008, 92, 014102.	1.5	9
40	Effects of Nb Modification and Cooling Rate on the Microstructure in an Ultrahigh Carbon Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2018, 49, 2161-2172.	1.1	9
41	Secondary electron dopant contrast imaging of compound semiconductor junctions. <i>Journal of Applied Physics</i> , 2011, 110, 014902.	1.1	8
42	Nucleation of in-grown stacking faults and dislocation half-loops in 4H-SiC epitaxy. <i>Journal of Applied Physics</i> , 2013, 114, .	1.1	8
43	Imaging Surface Pits and Dislocations in 4H-SiC by Forescattered Electron Detection and Photoluminescence. <i>Journal of Electronic Materials</i> , 2008, 37, 655-661.	1.0	7
44	Nondestructive dislocation delineation using topographically enhanced imaging of surface morphologies in 4H-SiC epitaxial layers. <i>Journal of Applied Physics</i> , 2008, 103, .	1.1	7
45	Micromachining imposed subsurface plastic deformation in single-crystal aluminum. <i>Materials Characterization</i> , 2021, 171, 110747.	1.9	7
46	Electron channeling contrast imaging of anti-phase boundaries in coherently strained La <sub>0.7</sub> Sr <sub>0.3</sub> MnO <sub>3</sub> thin films on (110)-oriented SrTiO <sub>3</sub> . <i>Applied Physics Letters</i> , 2015, 107, .	1.5	6
47	Femtosecond laser interactions with Co/Al multilayer films. <i>Materials Research Society Symposia Proceedings</i> , 2004, 850, 54.	0.1	5
48	Diffraction Contrast of Threading Dislocations in GaN and 4H-SiC Epitaxial Layers Using Electron Channeling Contrast Imaging. <i>Journal of Electronic Materials</i> , 2010, 39, 743-746.	1.0	5
49	Effects of Nitrogen Doping on Basal Plane Dislocation Reduction in 8° Off-Cut 4H-SiC Epilayers. <i>Materials Science Forum</i> , 0, 679-680, 63-66.	0.3	5
50	In situ biasing TEM investigation of resistive switching events in TiO <sub>2</sub> -based RRAM. , 2014, , .		5
51	Grain growth stagnation and texture development in an irradiated thermally stabilized nanocrystalline alloy. <i>Journal of Applied Physics</i> , 2019, 126, .	1.1	5
52	Measuring the Strain Sensitivity in Si (001) Electron Channeling Patterns Using Higher-order Laue Zone Line Shifts. <i>Microscopy and Microanalysis</i> , 2014, 20, 42-43.	0.2	4
53	Basal Plane Dislocation Mitigation in 8° Off-Cut 4H-SiC through <i>In Situ</i> Growth Interrupts during Chemical Vapor Deposition. <i>Materials Science Forum</i> , 0, 615-617, 61-66.	0.3	3
54	Pattern transfer with stabilized nanoparticle etch masks. <i>Nanotechnology</i> , 2013, 24, 085303.	1.3	3

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55	Interface Characterization of Al-Cu Microlaminates Fabricated By Electrically Assisted Roll Bonding. Journal of Micro and Nano-Manufacturing, 2017, 5, .	0.8	3
56	Effects of Cr Concentration on Cementite Coarsening in Ultrahigh Carbon Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 4779-4790.	1.1	3
57	Rapid characterization of extended defects in III-V/Si by electron channeling contrast imaging. , 2014, , .		2
58	Experimental Investigation of Sub-Surface Deformation using EBSD in Single Crystal Aluminum during Orthogonal Micromachining. Microscopy and Microanalysis, 2014, 20, 1472-1473.	0.2	2
59	Ultrashort Pulsed Laser Induced Heat Affected Zones Characterized by Ion Channeling Contrast Imaging. Microscopy and Microanalysis, 2014, 20, 1480-1481.	0.2	2
60	In Situ Biasing TEM Characterization of Resistive Switching Phenomena in TiO <sub>2</sub> -based RRAM. Microscopy and Microanalysis, 2014, 20, 1548-1549.	0.2	2
61	Cutting Reactive Foils Without Igniting Them (A Femtosecond Laser Machining Approach). Materials Research Society Symposia Proceedings, 2003, 800, 33.	0.1	1
62	The influence of substrate atomic step morphology on threading dislocation distributions in iii-nitride films. , 2007, , .		1
63	Structure and Orientation Determination of Metal-Oxide Nanostructures by Electron Backscatter Diffraction. Microscopy and Microanalysis, 2009, 15, 402-403.	0.2	1
64	Pulsed laser ignition thresholds of energetic multilayer foils. , 2009, , .		1
65	Growth of 4H- and 3C-SiC Epitaxial Layers on 4H-SiC Step-Free Mesas. Materials Science Forum, 0, 679-680, 119-122.	0.3	1
66	Transient thermometry and HRTEM analysis of RRAM thermal dynamics during switching and failure. , 2016, , .		1
67	A Review of Electron Channeling Contrast Imaging for Non-Destructive Defect Analysis of Crystalline Solids. Microscopy and Microanalysis, 2018, 24, 630-631.	0.2	1
68	Microscopy & Microanalysis 2018. Microscopy Today, 2019, 27, 30-31.	0.2	1
69	Nondestructive defect measurement and surface analysis of 3C-SiC on Si (001) by electron channeling contrast imaging. Materials Research Society Symposia Proceedings, 2008, 1068, 1.	0.1	0
70	Lateral/vertical Homoepitaxial Growth on 4H-SiC Surfaces Controlled by Dislocations. Materials Research Society Symposia Proceedings, 2008, 1069, 1.	0.1	0
71	Crystalline Quality and Surface Morphology of 3C-SiC Films on Si Evaluated by Electron Channeling Contrast Imaging. Materials Science Forum, 0, 615-617, 435-438.	0.3	0
72	Structure and defects in multilayer CVD graphene on C-face 6H-SiC. , 2009, , .		0

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73	Defect Analysis in La <sub>0.7</sub> Sr <sub>0.3</sub> MnO <sub>3</sub> Epitaxial Thin Films by Electron Channeling Contrast Imaging (ECCI). Microscopy and Microanalysis, 2014, 20, 1036-1037.	0.2	0
74	Site Specific TEM Specimen Preparation for Characterization of Extended Defects in 4H-SiC Epilayers. Microscopy and Microanalysis, 2014, 20, 344-345.	0.2	0
75	Using Electron Channeling Contrast Imaging for Misfit Dislocation Characterization in Heteroepitaxial III-V/Si Thin Films. Microscopy and Microanalysis, 2014, 20, 552-553.	0.2	0
76	A Method for Quantitative Analysis of Carbide Network Path Lengths in Ultrahigh Carbon Steel. Microscopy and Microanalysis, 2014, 20, 874-875.	0.2	0
77	Investigating the Effects of a Heat Treatment on Microstructure of an Ultrahigh Carbon Steel through SEM and In Situ CLSM studies. Microscopy and Microanalysis, 2014, 20, 964-965.	0.2	0
78	Strain Associated with Surface-Penetrating Dislocations Visible by Electron Channeling Contrast Imaging. Microscopy and Microanalysis, 2014, 20, 1076-1077.	0.2	0
79	Combined Electron Channeling Contrast Imaging (ECCI) and Transmission Electron Microscopy (TEM) Studies of Coherent Domain Boundaries in Strained La <sub>0.7</sub> Sr <sub>0.3</sub> MnO <sub>3</sub> (LSM) Epitaxial Thin Films. Microscopy and Microanalysis, 2016, 22, 1346-1347.	0.2	0
80	Automated Acquisition and Analysis of Selected Area Electron Channeling Patterns in an FEG-SEM. Microscopy and Microanalysis, 2017, 23, 550-551.	0.2	0
81	Investigating Defect Contrast in Ge <sub>x</sub> Si <sub>1-x</sub> /Si Epitaxial Structures Using Electron Channeling Contrast Imaging. Microscopy and Microanalysis, 2017, 23, 574-575.	0.2	0
82	Characterizing the Effect of ECAP on Particle Dispersion and Thermal Stability of Internally Oxidized Fe-Y Alloys. Microscopy and Microanalysis, 2018, 24, 2220-2221.	0.2	0
83	Automated Quadrat Analysis Technique for Particle Dispersion Quantification in Oxide Dispersion Strengthened Alloys. Microscopy and Microanalysis, 2018, 24, 592-593.	0.2	0
84	Microscopy & Microanalysis 2018 in Baltimore, Maryland. Microscopy Today, 2018, 26, 38-41.	0.2	0
85	Microscopy & Microanalysis 2018. Microscopy Today, 2018, 26, 46-47.	0.2	0